

Exploring Aeronautics			
2004 Science			
Standard Course of Study			
North Carolina Science			
Grade 5			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	NC	SCI.5.4.04	Determine that an unbalanced force is needed to move an object or change its direction.
Airplane Control(209-256)	NC	SCI.5.4.04	Determine that an unbalanced force is needed to move an object or change its direction.
How an Airplane Flies	NC	SCI.5.4.04	Determine that an unbalanced force is needed to move an object or change its direction.
The Tools of Aeronautics	NC	SCI.5.4.06.a	Devise a test for the model.
The Activity Center	NC	SCI.5.4.04	Determine that an unbalanced force is needed to move an object or change its direction.
Science of Flight	NC	SCI.5.4.04	Determine that an unbalanced force is needed to move an object or change its direction.
Integrating with Aeronautics	NC	SCI.5.4.04	Determine that an unbalanced force is needed to move an object or change its direction.
Intro to Aeronautics (109-123)	NC	SCI.5.4.04	Determine that an unbalanced force is needed to move an object or change its direction.
Exploring Aeronautics			
2004 Science			
Standard Course of Study			
North Carolina Science			
Grade 6			
Activity/Lesson	State	Standards	
Airplane Control(209-256)	NC	SCI.6.2.03.a	Evaluate technological designs for: Application of scientific principles.
Tools of Aeronautics(257-326)	NC	SCI.6.2.03.a	Evaluate technological designs for: Application of scientific principles.
The Tools of Aeronautics	NC	SCI.6.2.03.a	Evaluate technological designs for: Application of scientific principles.
The Tools of Aeronautics	NC	SCI.6.2.03.b	Evaluate technological designs for: Risks and benefits.
The Tools of Aeronautics	NC	SCI.6.2.03.c	Evaluate technological designs for: constraints of design
The Tools of Aeronautics	NC	SCI.6.2.03.d	Evaluate technological designs for: Consistent testing protocols.
The Tools of Aeronautics	NC	SCI.6.2.04.a	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: products.

The Tools of Aeronautics	NC	SCI.6.2.04.b	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: processes.
The Tools of Aeronautics	NC	SCI.6.2.04.c	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: systems..
Science of Flight	NC	SCI.6.1.01	Identify and create questions and hypotheses that can be answered through scientific investigations.
Science of Flight	NC	SCI.6.1.02.a	Develop appropriate experimental procedures for: Given questions.
Science of Flight	NC	SCI.6.1.05.a	Analyze evidence to: Explain observations.
Science of Flight	NC	SCI.6.1.07.a	Prepare models and/or computer simulations to: Test hypotheses.
Intro to Aeronautics (109-123)	NC	SCI.6.5.04.c	Describe space explorations and the understandings gained from them including: Historic timeline.
Intro to Aeronautics (109-123)	NC	SCI.6.5.06.e	Analyze the spin-off benefits generated by space exploration technology including: Future research.
Scientific Method(124-144)	NC	SCI.6.1.01	Identify and create questions and hypotheses that can be answered through scientific investigations.
<b>Exploring Aeronautics</b>			
<b>2004 Science</b>			
<b>Standard Course of Study</b>			
<b>North Carolina Science</b>			
<b>Grade 7</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fundamentals of Aeronautics (145-176)	NC	SCI.7.1.02.a	Develop appropriate experimental procedures for: Given questions.
Fundamentals of Aeronautics (145-176)	NC	SCI.7.1.02.b	Develop appropriate experimental procedures for: Student generated questions.
Fundamentals of Aeronautics (145-176)	NC	SCI.7.6.03.a	Evaluate motion in terms of Newton's Laws: The force of friction retards motion.
Fundamentals of Aeronautics (145-176)	NC	SCI.7.6.03.c	The greater the force, the greater the change in motion.
Fundamentals of Aeronautics (145-176)	NC	SCI.7.6.03.d	An object's motion is the result of the combined effect of all forces acting on the object:
Fundamentals of Aeronautics (145-176)	NC	SCI.7.6.03.f	Evaluate motion in terms of Newton's Laws: An object at rest will remain at rest.

Fundamentals of Aeronautics (145-176)	NC	SCI.7.6.05.b	Describe and measure quantities that characterize moving objects and their interactions within a system: Distance.
Fundamentals of Aeronautics (145-176)	NC	SCI.7.6.05.d	Describe and measure quantities that characterize moving objects and their interactions within a system: Force.
Wings(177-208)	NC	SCI.7.2.03.a	\Evaluate technological designs for: Application of scientific principles.
Wings(177-208)	NC	SCI.7.2.03.d	Evaluate technological designs for: Consistent testing protocols.
Airplane Control(209-256)	NC	SCI.7.6.03.c	The greater the force, the greater the change in motion.
Airplane Control(209-256)	NC	SCI.7.6.03.d	An object's motion is the result of the combined effect of all forces acting on the object:
Airplane Control(209-256)	NC	SCI.7.6.03.f	Evaluate motion in terms of Newton's Laws An object at rest will remain at rest.
Airplane Control(209-256)	NC	SCI.7.6.05.b	Describe and measure quantities that characterize moving objects and their interactions within a system: Distance.
Tools of Aeronautics(257-326)	NC	SCI.7.2.03.a	Evaluate technological designs for: Application of scientific principles.
How an Airplane Flies	NC	SCI.7.6.03.d	An object's motion is the result of the combined effect of all forces acting on the object:
How an Airplane Flies	NC	SCI.7.6.05.d	Describe and measure quantities that characterize moving objects and their interactions within a system: Force.
How an Airplane Flies	NC	SCI.7.6.05.f	Describe and measure quantities that characterize moving objects and their interactions within a system: Center of mass.
The Activity Center	NC	SCI.7.6.03.d	Evaluate motion in terms of Newton's Laws: An object's motion is the result of the combined effect of all forces acting on the object:
Science of Flight	NC	SCI.7.2.03.a	Evaluate technological designs for: Application of scientific principles.
Science of Flight	NC	SCI.7.3.01.d	Explain the composition, properties and structure of the atmosphere: As altitude increases, air pressure decreases.
Science of Flight	NC	SCI.7.3.05.c	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: Wind speed and direction.
Science of Flight	NC	SCI.7.3.05.d	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: Air pressure.
Science of Flight	NC	SCI.7.3.06.d	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: Recording.
Science of Flight	NC	SCI.7.6.03.a	Evaluate motion in terms of Newton's Laws: The force of friction retards motion.

Science of Flight	NC	SCI.7.6.03.b	Evaluate motion in terms of Newton's Laws: For every action there is an equal and opposite reaction.
Science of Flight	NC	SCI.7.6.03.c	Evaluate motion in terms of Newton's Laws: The greater the force, the greater the change in motion.
Science of Flight	NC	SCI.7.6.03.d	Evaluate motion in terms of Newton's Laws: An object's motion is the result of the combined effect of all forces acting on the object:
Science of Flight	NC	SCI.7.6.03.f	Evaluate motion in terms of Newton's Laws An object at rest will remain at rest.
Integrating with Aeronautics	NC	SCI.7.6.03.d	Evaluate motion in terms of Newton's Laws: An object's motion is the result of the combined effect of all forces acting on the object:
Intro to Aeronautics (109-123)	NC	SCI.7.6.03.b	Evaluate motion in terms of Newton's Laws: For every action there is an equal and opposite reaction.
Intro to Aeronautics (109-123)	NC	SCI.7.6.03.c	Evaluate motion in terms of Newton's Laws: The greater the force, the greater the change in motion.
Intro to Aeronautics (109-123)	NC	SCI.7.6.03.d	Evaluate motion in terms of Newton's Laws: An object's motion is the result of the combined effect of all forces acting on the object
Scientific Method(124-144)	NC	SCI.7.6.03.b	Evaluate motion in terms of Newton's Laws: For every action there is an equal and opposite reaction.
Scientific Method(124-144)	NC	SCI.7.6.03.c	Evaluate motion in terms of Newton's Laws: The greater the force, the greater the change in motion.
Scientific Method(124-144)	NC	SCI.7.6.03.d	Evaluate motion in terms of Newton's Laws: An object's motion is the result of the combined effect of all forces acting on the object
Scientific Method(124-144)	NC	SCI.7.6.03.f	Evaluate motion in terms of Newton's Laws: An object at rest will remain at rest.

### Exploring Aeronautics

### 2004 Science

### Standard Course of Study

<b>North Carolina Science</b>			
<b>Grade 8</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Wings(177-208)	NC	SCI.8.2.03.a	Evaluate technological designs for: Application of scientific principles.
Airplane Control(209-256)	NC	SCI.8.2.03.a	Evaluate technological designs for: Application of scientific principles.
Airplane Control(209-256)	NC	SCI.8.2.03.c	Evaluate technological designs for: constraints of design
Airplane Control(209-256)	NC	SCI.8.2.03.d	Evaluate technological designs for: Consistent testing protocols.
Tools of Aeronautics(257-326)	NC	SCI.8.2.02.b	Evaluate technological designs for: Locate resources to obtain and test ideas.
Tools of Aeronautics(257-326)	NC	SCI.8.2.03.a	Evaluate technological designs for: Application of scientific principles.

Tools of Aeronautics(257-326)	NC	SCI.8.2.03.c	Evaluate technological designs for: constraints of design
Tools of Aeronautics(257-326)	NC	SCI.8.2.03.d	Evaluate technological designs for: Consistent testing protocols.
The Tools of Aeronautics	NC	SCI.8.2.03.c	Evaluate technological designs for: constraints of design
The Tools of Aeronautics	NC	SCI.8.2.03.d	Evaluate technological designs for: Consistent testing protocols.
The Tools of Aeronautics	NC	SCI.8.2.04.a	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: products.
The Tools of Aeronautics	NC	SCI.8.2.04.b	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: processes.
The Tools of Aeronautics	NC	SCI.8.2.04.c	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: systems..
The Activity Center	NC	SCI.8.2.03.a	Evaluate technological designs for: Application of scientific principles.
The Activity Center	NC	SCI.8.2.03.d	Evaluate technological designs for: Consistent testing protocols.
Science of Flight	NC	SCI.8.1.01	Identify and create questions and hypotheses that can be answered through scientific investigations.
Science of Flight	NC	SCI.8.1.08.b	Defend conclusions of scientific investigations.
Science of Flight	NC	SCI.8.2.02.b	Evaluate technological designs for: Locate resources to obtain and test ideas.
Science of Flight	NC	SCI.8.2.03.a	Evaluate technological designs for: Application of scientific principles.
Science of Flight	NC	SCI.8.2.03.c	Evaluate technological designs for: constraints of design
Science of Flight	NC	SCI.8.2.03.d	Evaluate technological designs for: Consistent testing protocols.
Science of Flight	NC	SCI.8.2.04.a	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: products.
Science of Flight	NC	SCI.8.2.04.b	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: processes.
Science of Flight	NC	SCI.8.2.04.c	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: systems.
Intro to Aeronautics (109-123)	NC	SCI.8.2.03.a	Evaluate technological designs for: Application of scientific principles.
Intro to Aeronautics (109-123)	NC	SCI.8.2.03.c	Evaluate technological designs for: constraints of design
Intro to Aeronautics (109-123)	NC	SCI.8.2.03.d	Evaluate technological designs for: Consistent testing protocols.
Intro to Aeronautics (109-123)	NC	SCI.8.2.04.a	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: products.

Intro to Aeronautics (109-123)	NC	SCI.8.2.04.b	Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: processes.
Scientific Method(124-144)	NC	SCI.8.1.01	Identify and create questions and hypotheses that can be answered through scientific investigations.